

such that an image displayed at a point of intersection of two line segments forming the crisscross figure is positioned at the center of the display screen.

70. (Amended) A storage medium according to Claim 57, wherein the stored program includes computer executable code for causing the camera control apparatus to detect a scripting of a line that forms one loop on the display screen, and to output a control command for terminating control of the camera in response to the detection.

REMARKS

The claims now pending in the application are Claims 1 to 70, the independent claims being Claims 1, 18, 35 and 54.

In the Official Action dated May 24, 2002, Claims 1 to 4, 18 to 21, 35 to 40 and 54 to 57 were rejected under 35 U.S.C. § 103(a), as unpatentable over U.S. Patent No. 5,412,400 (Takahara), in view of U.S. Patent No. 5,808,670 (Oyashiki); Claims 9, 10, 13 to 16, 26, 27, 30 to 33, 45, 46, 49 to 52, 62, 63 and 66 to 69 were rejected under 35 U.S.C. § 103(a), as unpatentable over the Takahara '400 patent and the Oyashiki '670 patent, further in view of U.S. Patent No. 5,568,183 (Cortjens); and Claims 5 to 8, 22 to 25, 41 to 44 and 58 to 61 were rejected under 35 U.S.C. § 103(a) as unpatentable over the Takahara '400 patent, the Oyashiki '670 patent, and the Cortjens '183 patent, further in view of Japanese Patent Document No. 4-302587 (Kawai). Reconsideration and withdrawal of the rejections respectfully are requested in view of the above amendments and the following remarks.

Initially, Applicants gratefully acknowledge the Examiner's indication that the application contains allowable subject matter, and that Claims 11, 12, 17, 28, 29, 34, 47, 48, 53, 64, 65 and 70 are allowable over the prior art of record.

The rejections of the claims over the cited art respectfully are traversed. The present invention relates to a novel camera control apparatus and method. In one aspect, each of independent Claims 1 and 18 recites the feature of a selection device/step that collates a pattern of a figure detected by a detection device with figure patterns previously stored in a storage device, and selects a type of command for controlling the camera in accordance with a figure pattern which corresponds to the figure detected by a detection device/step; independent Claims 35 and 54 recite similar features with respect to a method of controlling a camera controlled system, and a storage medium storing a computer executable program for controlling a camera control apparatus.

Applicants submit that the prior art fails to anticipate the present invention. Moreover, Applicants submit that there are differences between the subject matter sought to be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

The Takahara '400 patent relates to a process monitoring system and a window displaying method therefore, and discloses a system and method including a window display mode, in which a window is opened in a registered window area, and a window frame is displayed in the window. At page 2 of the Official Action, the Examiner asserts that the Takahara '400 patent discloses the feature of "a detection device that detects a figure scripted on a display screen on which the image is being displayed by said display device," referring to the "TV camera frame" illustrated in Figure 24 of the Takahara '400

patent. However, Applicants submit that the Takahara '400 patent fails to disclose or suggest at least the above-described features of the present invention. Rather, as disclosed in the Takahara '400 patent, "a display picture frame is additionally formed with a frame [TV camera frame] which includes a window display configured of 'Left/Right' and 'Up/Down' concerning the image direction and 'Reduction/Enlarge' concerning the view, and the indications of selection switches [Left], [Right], [Up], [Down], [Reduction] and [Enlarge] concerning the selections of the direction and view." Thus, Applicants submit that the description of "the TV camera frame" illustrated in Figure 24 of the Takahara '400 patent merely relates to a display area; it does not refer to a display area in which a scripted figure is entered/detected, as disclose and claimed in the present application. Further, the Takahara '400 patent discloses that "on the display frame, the operator of the system depresses the selection switch, for example, [Right] concerning the image direction by use of the touch sensor 7. Then, a signal is received by the computer 3 through the touch sensor 7, the control signal is output from the TV camera actuator controller 92, and the TV camera actuator 91 moves the direction of the TV camera rightwards." (See, column 15, lines 60 to 67). That is, the Takahara '400 patent discloses that an operator of the system depresses a "selection switch"; nowhere does the Takahara '400 patent disclose or suggest the entry and detection of scripted figures, as disclosed and claimed in the present application.

The Oyashiki '670 patent relates to a method and system for camera control with monitoring area view, and discloses a system/method in which a monitoring area view is displayed on a monitor screen, where a point B indicative of the home position direction of a camera unit is input from a point input unit, and a line connecting the pick-up position

A of the camera unit and home position direction B thereof are set to be a virtual line C (0°), where a monitoring point X is input on the monitoring area view with a point input unit 4 to obtain a monitoring point angle θ_a which is defined by the designated monitoring point X, the origin A and the virtual line C, and where the camera unit is caused to undergo revolution by the monitoring point angle θ_a . At page 3 of the Official Action, the Examiner asserts that "... Oyashiki teaches a method and system for camera control with monitoring area wherein the positions indicative of the image picked-up positions of a camera unit (5) are produced in advance and stored in a controller." However, Applicants submit that the Oyashiki '670 patent fails to disclose or suggest at least the above-described features of the present invention. Rather, as acknowledged by the Examiner, in the Oyashiki '670 patent system, the "indicative positions" (coordinate data) are previously stored as shown, for example, in Column 6, lines 4 to 5; nowhere does the Oyashiki '670 patent disclose or suggest that the figure pattern is previously stored. At page 3, the Examiner further asserts that "... the controller (3) collates a pattern of figure detected by said point unit with figure patterns previously stored in the controller." However, in the Oyashiki '670 patent system, only the indicative positions (coordinate data) are stored. Applicants submit that it is not possible to collate a figure pattern on the basis of this input/disclosure. Further, as shown for example in Column 6, lines 22 to 25 of the Oyashiki '670 patent, "using the point input unit 4, the position to which it is desired to move the camera unit sight line, i.e., monitoring point X (XX,YY) is designated in the monitoring area display area 2a (step 7)." In other words, in the Oyashiki '670 patent system, only the monitoring point is designated to determine the position (coordinate); nowhere is a pattern of a figure detected, as disclosed and claimed in the present

application. Nor is it believed possible to collate the figure pattern, as noted above.

Accordingly, Applicants submit that the Oyashiki '670 patent also fails to disclose or suggest the feature of pre-storing figure patterns, where a selection device/step collates a pattern of the figure detected by a detection device with figure patterns previously stored in a storage device, and selects a type of command for controlling the camera in accordance with a figure pattern which corresponds to the figure detected by the detection device, as disclosed and claimed in the present application.

The Cortjens '183 patent relates to a network video conferencing system, and discloses a system including a plurality of network converters 11, a controller 10, a mouse 12, a control panel 13, and/or a joystick 18 for controlling the controller. However, Applicants submit that the Cortjens '183 patent fails to disclose or suggest at least the above-described features of the present invention. Rather, the Cortjens '183 patent is understood merely to disclose a control system for a camera in which control is effected on the basis of the positions of two points, PSP and PEP, where the only "pattern" of the Cortjens '183 patent is a line segment that connects the two points PSP and PEP. Nowhere does the Cortjens '183 patent disclose or suggest the feature of a selection device that collates a pattern of a figure detected by a detection device with figure patterns previously stored in a storage device, and selects a type of command for controlling the camera in accordance with a figure pattern which corresponds to the figure detected by the detection device, as disclosed and claimed in the present application. Nor is the Cortjens '183 patent understood to add anything to the Takahara '400 patent and the Oyashiki '670 patent that would make obvious the claimed invention.

The Kawai JP '587 reference relates to a video camera control apparatus, and was cited for its disclosure of structure and method for outputting pan and tilt commands in accordance with the length of a line segment. Applicants submit that the Kawai JP '587 reference fails to disclose or suggest at least the above-described features of the present invention. Nor is the Kawai JP '587 reference understood to add anything to the above-discussed patents that would make obvious the claimed invention.

For the above reasons, Applicants submit that independent Claims 1, 18, 35 and 54 are allowable over the cited art.


Claims 2 to 17, 19 to 34, 36 to 53 and 55 to 70 depend from Claims 1, 18, 35 and 54, respectively, and are believed allowable for the same reasons. Moreover, each of these dependent claims recites additional features in combination with the features of its respective base claim, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Applicants request that the present Request be entered under 37 CFR § 1.116. Applicants submit that the present Request merely is formal in nature, and reduces the number of issues for consideration. Applicants believe the present Request was necessitated by the outstanding Official Action.

Applicants believe that the present Request is responsive to each of the points raised by the Examiner in the Official Action, and submit that the application is in allowable form. Favorable reconsideration of the claims and passage to issue of the present application at the Examiner's earliest convenience earnestly are solicited.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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